

**WHAT IS CLAIMED IS:**

- 1           1.       An ink cartridge for an ink jet printer comprising:  
2                   a substratum;  
3                   a cover attached to the substratum and having an aperture provided  
4       therein;  
5                   a printhead attached to the substratum and provided at least partially  
6       within the aperture;  
7                   at least one connector extending from the printhead into the aperture;  
8                   an adhesive material covering at least a portion of the at least one  
9       connector; and  
10                  at least one barrier that prevents the adhesive material from flowing to  
11       locations away from the at least one connector.
- 1           2.       The ink cartridge of claim 1, wherein the substratum has a plurality of  
2       electrical contacts provided thereon.
- 1           3.       The ink cartridge of claim 2, wherein the plurality of electrical contacts  
2       provided on the substratum are provided within the aperture.
- 1           4.       The ink cartridge of claim 3, wherein the printhead includes a nozzle  
2       surface and a plurality of contacts provided on the nozzle surface and wherein the at  
3       least one connector comprises a plurality of wires that extend between the plurality of  
4       contacts provided on the nozzle surface and the plurality of contacts provided on the  
5       substratum.
- 1           5.       The ink cartridge of claim 1, wherein the printhead has a perimeter and  
2       is provided in the aperture such that a gap is provided between the printhead and the  
3       cover about the perimeter of the printhead and wherein the printhead has a plurality of  
4       sides and the at least one barrier prevents the adhesive material from flowing along  
5       the length of at least one of the sides of the printhead.

1           6.       The ink cartridge of claim 1, wherein the cover includes at least one  
2 cutout extending from the aperture and at least a portion of the at least one barrier is  
3 provided in the at least one cutout.

1           7.       The ink cartridge of claim 1, wherein the at least one barrier comprises  
2 an adhesive material.

1           8.       The ink cartridge of claim 7, wherein the at least one barrier comprises  
2 an epoxy.

1           9.       The ink cartridge of claim 1, wherein the at least one barrier comprises  
2 a dam provided adjacent at least a portion of the printhead and comprising an  
3 adhesive material.

1           10.      The ink cartridge of claim 9, wherein at least a portion of the dam is  
2 provided in a cutout extending from the aperture.

1           11.      The ink cartridge of claim 1, wherein the adhesive material covering at  
2 least a portion of the at least one connector comprises an epoxy.

1           12.      The ink cartridge of claim 1, wherein the at least one barrier comprises  
2 an epoxy having a higher viscosity than the adhesive material covering at least a  
3 portion of the at least one connector.

1           13.      The ink cartridge of claim 1, further comprising a pressure sensitive  
2 adhesive for attaching the cover to the substratum.

1           14.      The ink cartridge of claim 1, wherein the cover has a top surface and  
2 the at least one barrier protrudes from the top surface for preventing the flow of  
3 adhesive over the cover beyond the at least one barrier.

1           15.      The ink cartridge of claim 14, wherein the aperture provided in the  
2 cover has a side adjacent an end of the printhead and the at least one barrier acts to

3 prevent the flow of the adhesive material over the cover beyond the at least one  
4 barrier.

1 16. The ink cartridge of claim 1, wherein at least a portion of at least one  
2 barrier has a relatively rounded cross-sectional shape.

1 17. A fluid ejection cartridge for an ink jet printer comprising:  
2 a substratum having a plurality of printheads attached thereto;  
3 a cover attached to the substratum and having a plurality of apertures  
4 formed therein, each of the apertures configured to receive at least one of the plurality  
5 of printheads therein;  
6 at least one connector extending from each of the plurality of  
7 printheads to contacts provided on the substratum;  
8 an adhesive material covering at least a portion of the at least one  
9 connector and filling at least a portion of each of the plurality of apertures; and  
10 means for preventing the adhesive material from flowing to locations  
11 away from areas near the at least one connector.

1 18. The fluid ejection cartridge of claim 17, wherein the substratum has a  
2 plurality of electrical contacts provided thereon, wherein each of the plurality of  
3 apertures has at least one electrical contact provided within the aperture, wherein each  
4 of the printheads includes a nozzle surface and a plurality of contacts provided on the  
5 nozzle surface, and wherein the at least one connector comprises a plurality of wires  
6 and each of the plurality of wires extend between at least one of the plurality of  
7 contacts provided on the nozzle surface and at least one of the plurality of contacts  
8 provided on the substratum.

1 19. The fluid ejection cartridge of claim 17, wherein the cover is attached  
2 to the substratum such that a gap exists between each of the plurality of printheads  
3 and the cover.

1 20. The fluid ejection cartridge of claim 19, wherein each of the printheads  
2 has a plurality of sides and the means for preventing the adhesive material from

3 flowing to locations away from the at least one connector includes means for  
4 preventing the adhesive material from flowing along at least one of the sides of the  
5 printheads.

1 21. The fluid ejection cartridge of claim 20, wherein the cover includes a  
2 plurality of cutouts extending from each of the apertures.

1 22. The fluid ejection cartridge of claim 17, wherein the adhesive material  
2 covering at least a portion of the at least one connector comprises an epoxy.

1 23. The fluid ejection cartridge of claim 17, wherein the cover has a top  
2 surface and the means for preventing the adhesive material from flowing prevents the  
3 flow of adhesive over the cover beyond the means for preventing the adhesive  
4 material from flowing.

1 24. A cover for a fluid ejection device for an ink jet printer comprising:  
2 at least one aperture configured to receive at least a portion of a  
3 printhead therein when the cover is coupled to the fluid ejection device; and  
4 a barrier protruding from a surface of the cover adjacent at least a  
5 portion of the aperture; and  
6 wherein the barrier is configured to restrict the flow of an adhesive  
7 utilized to encapsulate at least one connector used to electrically connect the printhead  
8 to the fluid ejection device.

1 25. The cover of claim 24, wherein the barrier is integrally formed with the  
2 cover.

1 26. The cover of claim 24, wherein at least a portion of the barrier has a  
2 relatively rounded cross-sectional shape.

1 27. The cover of claim 24, wherein the aperture has at least one side and  
2 the barrier extends along the entire side of the aperture.

1           28.     The cover of claim 24, wherein the cover has a size and shape such  
2     that a gap is provided between the cover and the printhead when the cover is coupled  
3     to the fluid ejection device.

1           29.     The cover of claim 24, wherein the cover further comprises at least one  
2     cutout formed in the cover extending outward from the aperture for receiving therein  
3     at least a portion of a barrier material.

1           30.     A cover for a fluid ejection device for an ink jet printer comprising:  
2                   at least one aperture configured to receive at least a portion of a  
3     printhead therein when the cover is coupled to the fluid ejection device; and  
4                   at least one cutout formed in the cover extending outward from the  
5     aperture for receiving therein at least a portion of a barrier material;  
6                   wherein the barrier material is configured to restrict the flow of an  
7     adhesive utilized to encapsulate at least one connector used to electrically connect the  
8     printhead to the fluid ejection device.

1           31.     The cover of claim 30, wherein at least a portion of the at least one  
2     cutout has a relatively rounded shape.

1           32.     The cover of claim 30, wherein the cover comprises at least two  
2     cutouts formed in the cover extending outward from the aperture.

1           33.     The cover of claim 32, wherein each of the cutouts are configured to  
2     received at least a portion of a barrier that is configured to prevent the flow of the  
3     adhesive along the length of the printhead when the cover and printhead are coupled  
4     to the fluid ejection device.

1           34.     The cover of claim 30, wherein the cover has a size and shape such the  
2     a gap is provided between the cover and the printhead when the cover is coupled to  
3     the fluid ejection device.

1           35.     The cover of claim 30, wherein the cover further comprises a barrier  
2     protruding from a surface of the cover adjacent at least a portion of the aperture.

1           36.     A method for manufacturing an ink jet printer cartridge comprising:  
2                     attaching a printhead to a substratum;  
3                     attaching a cover to the substratum such that the printhead is provided  
4     at least partially in an aperture formed in the cover and a gap exists between the  
5     printhead and the cover; and  
6                     coupling the printhead to the substratum using a plurality of wires; and  
7                     providing at least one barrier in the gap between the printhead and the  
8     cover.

1           37.     The method of claim 36, further comprising filling at least a portion of  
2     the gap between the printhead and the cover with an adhesive material, wherein the at  
3     least one barrier restricts the flow of the adhesive material.

1           38.     The method of claim 37, wherein the step of filling at least a portion of  
2     the gap between the printhead and the cover with an adhesive comprises  
3     encapsulating at least a portion of the wires.

1           39.     The method of claim 38, wherein the step of filling at least a portion of  
2     the gap between the printhead and the cover with an adhesive comprises  
3     encapsulating a first portion of the wires and further comprising encapsulating a  
4     second portion of the wires with an adhesive different from the adhesive used to  
5     encapsulate the first portion of the wires.

1           40.     The method of claim 39, wherein the aperture includes at least one  
2     recess extending outward from the printhead and at least a portion of the at least one  
3     barrier is provided in the recess.

1           41.     The method of claim 36, wherein barrier comprises an adhesive  
2     material.

1           42.     The method of claim 41, wherein the barrier comprises an epoxy.

1           43.     The method of claim 36, wherein the step of providing at least one  
2     barrier in the gap between the printhead and the cover comprises providing at least

3 two barriers in the gap between the printhead and the cover adjacent an end of the  
4 printhead.

1 44. The method of claim 43, wherein the wires are provided adjacent the  
2 end of the printhead and further comprising encapsulating at least a portion of the  
3 wires with an adhesive material.

1 45. The method of claim 44, wherein the at least two barriers retain the  
2 adhesive material adjacent the end of the printhead.

1 46. The method of claim 36, wherein the cover has a top surface and  
2 further comprising providing a barrier that protrudes from the top surface.

1 47. The method of claim 46, further comprising providing an adhesive  
2 material in at least a portion of the gap between the cover and the printhead, wherein  
3 the barrier protruding from the top surface acts to prevent the flow of adhesive  
4 material onto the cover beyond the barrier.